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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/534,012	05/05/2005	Santtu Naukkarinen	915-007.141	8466

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EXAMINER	
NGUYEN, TU X	
ART UNIT	**PAPER NUMBER**
2618	

MAIL DATE	DELIVERY MODE
10/02/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/534,012	NAUKKARINEN ET AL.	
	Examiner	Art Unit	
	Tu X. Nguyen	2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 May 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,5-15 and 19-23* is/are rejected.

7)☒ Claim(s) *2-4 and 16-18* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *05 May 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

Claims 1, 4-10, 14-15 and 19-23 rejected under 35 U.S.C. 102(e) as being anticipated by Levine et al. (US Patent 2003/0135327).

Regarding claim 1, Levine et al. disclose a mobile electronic system comprising :

output means enabling a presentation of information to a user of said mobile electronic system (see fig.1, element 220);

a 3D magnetometer performing magnetic measurements in three dimensions and providing data indicative of the current posture of said mobile electronic system based on said measurements (see fig.1, element 120); and

processing means (see fig.1, element 110) processing said data provided by said 3D magnetometer for enabling a posture related presentation of information via said output means, including selecting one of at least two different modes of presentation based on said data provided by said 3D magnetometer (see par.0102).

Regarding claim 5, Levine et al. disclose further comprising additional sensor means providing additional measurement data, wherein said processing means use said additional measurement data in addition for enabling a posture related presentation of information via said output means (see par.106).

Regarding claim 6, Levine et al. disclose processing means use said additional measurement data provided by said additional sensor means at least for one of the following: adjusting a presentation of information via said output means and filtering signals provided by said 3D magnetometer (see par.106).

Regarding claim 7, Levine et al. disclose said sensor means comprise a 2D or 3D linear accelerometer measuring the acceleration of said mobile electronic system in three dimensions (see par.106).

Regarding claim 8, Levine et al. disclose said sensor means comprise a 3D angular accelerometer measuring the angular acceleration of said mobile electronic system in three dimensions (see par.106).

Regarding claim 9, Levine et al. disclose said 3D magnetometer provides first data indicating a current heading of said mobile electronic system, wherein said 3D angular accelerometer provides second data indicating a current heading of said mobile electronic system, and wherein said processing means comprise a complementary filter combining said first and said second data indicating a current heading of said mobile electronic system (see par.102).

Regarding claim 10, Levine et al. disclose realizing an inertial navigation system (see par.010).

Regarding claim 14, Levine et al. disclose a user equipment comprising a mobile electronic system (see par.097).

Regarding claim 15, Levine et al. disclose a method for use in a mobile electronic system, said method comprising: performing magnetic measurements in three dimensions in

said mobile electronic system; determining data indicative of the current posture of said mobile electronic system based on said performed magnetic measurements; and processing said data for enabling a posture related presentation of information to a user of said mobile electronic system, said processing comprising selecting one of at least two different modes of presentation based on said data indicative of the current posture of said mobile electronic system (see fig.1, par.102).

Regarding claim 19, Levine et al. disclose performing additional measurements in said mobile electronic system, wherein said processing is based in addition on measurement data resulting in said additional measurements (see par.106).

Regarding claim 20, Levine et al. disclose said processing comprises using said additional measurement data at least for one of the following: adjusting a presentation of information and filtering signals resulting in said performed magnetic measurements (see par.106).

Regarding claim 21, Levine et al. disclose performing said additional measurements comprises measuring the acceleration of said mobile electronic system in three dimensions (see par.106).

Regarding claim 22, Levine et al. disclose performing said additional measurements comprises measuring the angular acceleration of said mobile electronic system in three dimensions (see par.010).

Regarding claim 23, Levine et al. disclose processing comprises combining first data indicating a current heading of said mobile electronic system and second data indicating a current heading of said mobile electronic system by a complementary filtering, which first data

is based on said magnetic measurements and which second data is based on said angular acceleration measurement (see par.010).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Levine et al. in view of Ellenby et al. (US Pub. 20020140745).

Regarding claim 11, Levine et al. disclose at least said output means are comprised in a user equipment, wherein at least said 3D magnetometer, wherein said user equipment and said complementary unit comprise respective connection means rigidly and electrically connecting said complementary unit and said user equipment for providing signals which are based on magnetic measurements of said 3D magnetometer to said user equipment (see fig.1).

Levine et al. fail to disclose said 3D magnetometer is comprised in a complementary unit external to said user equipment.

Ellenby et al. disclose said 3D magnetometer is comprised in a complementary unit external to said user equipment (see fig.8-19, element 81, par.0162). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Levine et al. with the above teaching of Ellenby et al. in order to provide an external Magnetometer device ready for integration with the mobile device.

Regarding claims 12-13, the combined Levine et al. disclose a complementary unit for a mobile electronic (see fig. 8-10).

Allowable Subject Matter

Claims 2-4 and 16-18, objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is an examiner's statement of reasons for allowance:

Regarding dependent claim 2, the prior art fails to disclose "wherein said processing means present compass information (13,14,15,43-46) via said output means (12,42) based on said data provided by said 3D magnetometer".

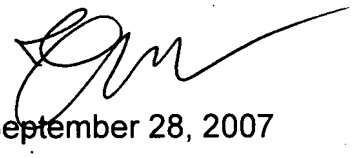
Regarding dependent claim 16, the prior art fails to disclose "comprising presenting compass information (13,14,15,43-46) obtained in said processing".

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed Tu Nguyen whose telephone number is 571-272-7883.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban, can be reached at (571) 272-7899. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



September 28, 2007